

**REMARKS**

Claims 1-8, 10, 12 and 14 are pending. Applicants acknowledge rejoinder of claims 10, 12 and 14 pursuant to allowance of claims 1-8. By the present communication, no claims have been added or canceled, and claims 10, 12 and 14 have been amended to define Applicants' invention with greater particularity. Support for the amendments can be found throughout the application as filed. In particular, support for the amendments to claims 12 and 14 reciting a reaction network representing an organism can be found at, for example, page 11, lines 2 through page 12, line 23 of the specification as filed. Support for the amendment to claim 10 can be found at, for example, page 11, lines 17-19. Support for the amendment to claim 12, directed to bio-molecules of no value, can be found at, for example, page 11, lines 31-33. Support for the amendment to claim 12 wherein the product produced by the organism is the undesired valueless bio-molecule can be found at, for example, page 11, line 31 through page 12, line 1. Support for the amendment to claims 12 and 14, directed to re-engineering the organism to fail in certain reactions can be found at, for example, page 11, line 31 through page 12, line 7. Support for the amendment to claim 14 directed to producing desired bio-molecules of value by multiple metabolic routes can be found at, for example, page 12, lines 8-13. Accordingly, the amendments do not raise an issue of new matter and entry thereof is respectfully requested.

**Rejections Under 35 U.S.C. § 112, First Paragraph**

Applicants respectfully traverse the rejection of claims 12 and 14 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. Specifically, the Office Action alleges that the claims encompass a reaction network that *is* an organism producing desired bio-molecules. Without acquiescing to the reasoning offered by the Office, and in order to expedite prosecution of the instant application, Applicants have amended claims 12 and 14 to clarify that the reaction network analyzed *represents* an organism. Accordingly, Applicants respectfully submit that the claimed invention is fully enabled by the specification as filed, and request withdrawal of the rejection.

**Rejections Under 35 U.S.C. § 112, Second Paragraph**

Applicants respectfully traverse the rejection of claims 10, 12, and 14 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Specifically, the Office Action alleges that claim 10 is indefinite for containing an incomplete phrase. Without acquiescing to the reasoning offered by the Office, and in order to expedite prosecution of the instant application, Applicants have amended claim 10 to correct this obvious typographical error, and respectfully request withdrawal of this ground of the rejection.

The Office Action alleges that claim 12 is indefinite for containing incomplete and/or nonsensical phrases. Without acquiescing to the reasoning offered by the Office, and in order to expedite prosecution of the instant application, Applicants have amended claim 12 to correct the obvious grammatical error by deleting the term “both,” and to recite that the product produced by the organism is the undesired valueless bio-molecule. Withdrawal of these grounds of the rejection is respectfully requested.

The Office Action alleges that claims 12 and 14 are indefinite for containing nonsensical limitations. Without acquiescing to the reasoning offered by the Office, and in order to expedite prosecution of the instant application, Applicants have amended claims 12 and 14 to recite re-engineering the organism to fail in those reactions that produce the metabolite. Withdrawal of these grounds of the rejection is respectfully requested.

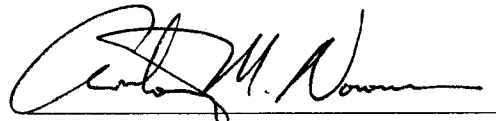
### CONCLUSION

In summary, for the reasons set forth herein, Applicants respectfully submit that the claims clearly and patentably define the invention, and allowance of the claims is respectfully requested. If the Examiner would like to discuss any issues raised in the Office Action, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

No fee is believed to be due in connection with the filing of this paper. However, the Commissioner is hereby authorized to charge any fees that may be required by this paper, or credit any overpayment to Deposit Account 07-1896 referencing the above-identified attorney docket number.

Respectfully submitted,

Date: May 13, 2008



Antony M. Novom, J.D.  
Registration No. 45,517  
Telephone: (858) 638-6641  
Facsimile: (858) 677-1465

DLA PIPER US LLP  
4365 Executive Drive, Suite 1100  
San Diego, CA 92121-2133  
**USPTO CUSTOMER NUMBER 28213**